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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,370	09/17/2001	Patrick L. Connor	42390.P12273	8351

7590 09/22/2004

EXAMINER	
HUYNH, KIM T	

ART UNIT	PAPER NUMBER
2112	

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DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/955,370	CONNOR ET AL.	
	Examiner	Art Unit	
	Kim T. Huynh	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Edholm (Pub No US20030067940)

As per claim 1, Edholm discloses A method, comprising:

- monitoring a level of a packet queue of a protocol stack; and [0030]
- disabling a normal incoming packet procedure in response to the level of the packet queue satisfying an entry condition and enabling an alternate incoming packet procedure, the alternate incoming packet procedure including indicating new packets if any, to the protocol stack at an indication rate in response to a packet processing rate and altering the indication rate in response to the level of the packet queue satisfying one or more secondary conditions, if any. [0026-0030], figure 6.

As per claim 2, Edholm discloses the method further comprising, disabling the alternate incoming packet procedure and enabling the normal incoming packet

procedure in response to the level of the packet queue satisfying an exit condition. [0029-0030]

As per claim 3, Edholm discloses wherein the normal incoming packet procedure includes generation of receive interrupts and automatic packet indication. [0034]

As per claim 4, Edholm discloses wherein the normal incoming packet procedure includes a polling technique. Figure 6, counter implies polling

As per claim 5, Edholm discloses wherein the level of the packet queue satisfying the entry condition comprises the level of the packet queue exceeding an initial threshold value. [0030]

As per claim 6, Edholm discloses wherein the indication rate comprises a rate equal to or less than a packet processing rate. [0030], figure 6

As per claim 7, Edholm discloses wherein the level of the packet queue satisfying the exit condition comprises the level of the packet queue falling below an exit threshold value. [0030]

As per claim 8, Edholm discloses wherein the level of the packet queue satisfying the entry condition comprises the level of the packet queue exceeding an initial threshold value, and the level of the packet queue satisfying the exit condition comprises the level of the packet queue falling below an exit threshold value. [0030]

As per claim 9, Edholm discloses wherein the indication rate comprises a rate greater than a packet processing rate, and altering the indication rate in response to the level of the packet queue satisfying one or more secondary conditions

comprises reducing the indication rate in response to the level of the packet queue exceeding a limiting threshold value. [0029-0030]

As per claim 10, Edholm discloses wherein reducing the indication rate comprises reducing the indication rate to a rate equal to or less than the packet processing rate. [0030]

As per claim 11, Edholm discloses wherein altering the indication rate in response to the level of the packet queue satisfying one or more secondary conditions further comprises increasing the indication rate in response to the level of the packet queue falling below a nonlimiting threshold value. [0030]

As per claim 12, Edholm discloses wherein increasing the indication rate comprises increasing the indication rate to a rate greater than the packet processing rate. [0030]

As per claim 13, Edholm discloses wherein the level of the packet queue corresponds to a number of outstanding packets. [0030]

As per claim 14, Edholm discloses wherein the level of the packet queue corresponds to a number of receive packet buffers. [0030]

As per claim 15, Edholm discloses wherein monitoring the level of the packet queue of the protocol stack comprises:

- identifying a number of packets indicated to the protocol stack; [0030]
- identifying a number of packets processed by the protocol stack; and
- calculating a difference between the number of packets indicated to the protocol stack and the number of packets processed by the protocol stack,

wherein the difference comprises a value corresponding to the level of the packet queue of the protocol stack. [0029-30], figure 6, counter)

As per claim 16, Edholm discloses wherein monitoring the level of the packet queue of the protocol stack comprises:

- identifying an initialization number of receive packet buffers; [0030]
- identifying a number of available receive packet buffers in host memory; [0030] and
- calculating a difference between the initialization number of receive packet buffers and the number of available receive packet buffers in host memory, wherein the difference comprises a value corresponding to the level of the packet queue of the protocol stack. [0029-0030]

As per claim 17, Edholm discloses wherein the initial threshold value corresponds to a number of receive packet buffers, the number of receive packet buffers equal to a percentage of an initialization number of receive packet buffers. [0030]

As per claim 18, Edholm discloses wherein the initial threshold value corresponds to a number of outstanding packets. [0030]

As per claim 19, Edholm discloses wherein the exit threshold value is less than or equal to the initial threshold value. [0030]

As per claim 20, Edholm discloses wherein the packet processing rate comprises a rate at which receive packet buffers are returned to a device driver from the protocol stack. [0030]

As per claim 21, Edholm discloses wherein the packet processing rate comprises a rate at which packets are processed by the protocol stack. [0030]

As per claim 22, Edholm discloses a method, comprising:

- monitoring a level of a packet queue of a protocol stack; and [0030]
- in response to the level of the packet queue exceeding an initial threshold value, disabling generation of receive interrupts, disabling automatic packet indication, identifying new packets, if any, and indicating new packets, if any, to the protocol stack at an indication rate equal to or less than a packet processing rate; and [0030]
- in response to a decrease in the level of the packet queue below an exit threshold value, enabling the generation of receive interrupts, and enabling the automatic packet indication. [0030]

As per claim 23, Edholm discloses wherein the initial threshold value corresponds to a number of outstanding packets. [0030]

As per claim 24, Edholm discloses wherein the exit threshold value is less than or equal to the initial threshold value. [0030]

As per claims 25, 30, Edholm discloses an apparatus, comprising:

- a processor; [0039]
- a memory, coupled to the processor, to store a plurality of machine instructions including a protocol stack and a device driver; and [0030]
- a communications interface (fig.1, 104), coupled to the processor, and capable of being connected to a network;

- wherein execution of the machine instructions by the processor cause the apparatus to monitor a level of a packet queue of the protocol stack, and to disable a normal incoming packet procedure associated with the communications interface and the device driver in response to the level of the packet queue satisfying an entry condition and enable an alternate incoming packet procedure associated with the communications interface and the device driver, the alternate incoming packet procedure including the device driver indicating new packets, if any, to the protocol stack at an indication rate in response to a packet processing rate and altering the indication rate in response to the level of the packet queue satisfying one or more secondary conditions, if any. [0026-0030]

As per claims 26, 31, Edholm discloses wherein execution of the machine instructions by the processor further cause the apparatus to disable the alternate incoming packet procedure and enable the normal incoming packet procedure in response to the level of the packet queue satisfying an exit condition. [0030]

As per claims 27, 32, Edholm discloses wherein the level of the packet queue satisfying the entry condition comprises the level of the packet queue exceeding an initial threshold value, the indication rate comprises a rate equal to or less than the packet processing rate, and the level of the packet queue satisfying the exit condition comprises the level of the packet queue falling below an exit threshold value. [0030], figure 6.

As per claims 28, 33, Edholm discloses wherein the indication rate comprises a rate greater than a packet processing rate, and altering the indication rate in response to the level of the packet queue satisfying one or more secondary conditions comprises reducing the indication rate in response to the level of the packet queue exceeding a limiting threshold value. [0030]

As per claims 29, 34, Edholm discloses wherein altering the indication rate in response to the level of the packet queue satisfying one or more secondary conditions further comprises increasing the indication rate in response to the level of the packet queue falling below a nonlimiting threshold value. [0030]

Response to Amendment

3. Applicant's amendment filed on 6/10/04 have been fully considered but not place an application in condition for allowance.

a. In response to applicant's argument that Edholm does not disclose or suggest "disabling a normal incoming packet procedure in response to the level of the packet queue satisfying an entry condition and enabling an alternate incoming packet procedure". Examiner respectfully disagrees. As Edholm notes at [0029-0030], discloses control application 332 monitors protocol stack transfers a packet to memory queue for transmission. When the bandwidth limitations have been exceeded, the control waits (disabling normal incoming packets) before placing the data packet on the transmit queue. When the bandwidth limitations have not been exceeded, the control releases (enabling incoming packets). Furthermore, Edholm notes [0026-0028], Examiner further cited for clarification, discloses incoming packets will be measured,

when threshold has a value of zero, incoming packets are allowed to pass to the local cite. They are selected on the basis criteria of associated quality of their source address relative to currently prevalent threshold (implies enabling alternate incoming packet procedure). It is clear that Edholm is an analogous art and it reads on the breadth of the claim languages; therefore it is properly stated in the rejection of record.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

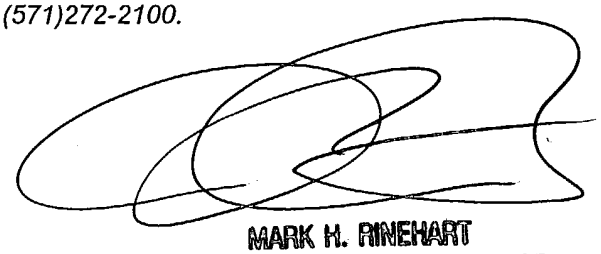
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (571)272-3635 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 9.00AM- 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (571)272-3632 or via e-mail addressed to [mark.rinehart@uspto.gov]. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.

Kim Huynh

September 14, 2004



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